IN THE CLAIMS:

1. (currently amended) An apparatus comprising:

> a software driver configured to cause a plurality of work queue elements to be stored in a queue pair including a plurality of storage locations;

> wherein each of said plurality of storage locations includes an indicator indicating whether a corresponding work queue element has been completed; and

> a hardware adapter configured to select one of said plurality of storage locations and to service a corresponding one of said plurality of work queue elements, and in response to completion of a task associated with said corresponding work queue element, to ~~cause~~ <u>allow</u> said indicator to indicate that said corresponding work queue element been completed;

> wherein said software driver is configured to cause a new work queue element to be stored in ~~said selected storage location~~ <u>said selected one of said plurality of storage locations</u> in response to detecting that said indicator indicates that said corresponding work queue element has been completed.

2. (currently amended) The apparatus as recited in claim 1, wherein said hardware adapter comprising a first register for storing a virtual address of ~~said selected storage location~~ <u>said selected one of said plurality of storage locations</u> and said corresponding work queue element.

3. (original) The apparatus as recited in claim 2, wherein said software driver is further configured to notify said hardware adapter when said new work queue element is stored by causing said virtual address of said new work queue element to be written to said first register of said hardware adapter.

6

4. (original) The apparatus as recited in claim 3, wherein said hardware adapter further comprising a second register for indicating a number of pending work queue elements remaining to be serviced.

5. (original) The apparatus as recited in claim 4, wherein said hardware adapter is further configured to increment said second register in response to receiving said notification from said software driver.

6. (original) The apparatus as recited in claim 2, wherein said hardware adapter further comprising an in-service bit for indicating whether said selected work queue element corresponding to said virtual address in said first register has been serviced.

7. (original) The apparatus as recited in claim 1, wherein said software driver is further configured to allocate said plurality of storage locations in a memory for said queue pair.

8. (original) The apparatus as recited in claim 7, wherein said software driver is further configured to allocate additional pluralities of storage locations in said memory for a plurality of additional queue pairs.

9. (currently amended) A system comprising:

> one or more processors;

> a memory operatively coupled to said processor; and

> an apparatus including:

>> a software driver configured to cause a plurality of work queue elements to be stored in a queue pair including a plurality of storage locations;

wherein each of said plurality of storage locations includes an indicator indicating whether a corresponding work queue element has been completed; and

a hardware adapter configured to select one of said plurality of storage locations and to service a corresponding one of said plurality of work queue elements, and in response to completion of a task associated with said corresponding work queue element, to ~~cause~~ <u>allow</u> said indicator to indicate that said corresponding work queue element has been completed;

wherein said software driver is configured to cause a new work queue element to be stored in ~~said selected storage location~~ <u>said selected one of said plurality of storage locations</u> in response to detecting that said indicator indicates that said corresponding work queue element has been completed.

10. (currently amended) The system as recited in claim 9, wherein said hardware adapter comprising a first register for storing a virtual address of ~~said selected storage location~~ <u>said selected one of said plurality of storage locations</u> and said corresponding work queue element.

11. (original) The system as recited in claim 10, wherein said software driver is further configured to notify said hardware adapter when said new work queue element is stored by causing said virtual address of said new work queue element to be written to said first register of said hardware adapter.

12. (original) The system as recited in claim 11, wherein said hardware adapter further comprising a second register for indicating a number of pending work queue elements remaining to be serviced.

13. (original) The system as recited claim 12, wherein said hardware adapter is further configured to increment said second register in response to receiving said notification from said software driver.

8

14. (original) The system as recited claim 10, wherein said hardware adapter further comprising an in-service bit for indicating whether said selected work queue element corresponding to said virtual address in said first register has been serviced.

15. (original) The system as recited in claim 9, wherein said software driver is further configured to allocate said plurality of storage locations in said memory for said queue pair in response to a request from said one or more processors.

16. (original) The system as recited in claim 9, wherein said software driver is further configured to allocate additional pluralities of storage locations in said memory for a plurality of additional queue pairs in response to a plurality of requests from said one or more processors.

17. (currently amended) A method comprising:

> storing a plurality of work queue elements in a queue pair including a plurality of storage locations;

> selecting one of said plurality of storage locations and servicing a corresponding one of said plurality of work queue elements;

> providing an indicator in each of said plurality of storage locations to indicate that a corresponding work queue element has been completed ~~in response to completion of a task associated with said corresponding work queue element~~;

> in response to completion of a task associated with said corresponding work queue element, a hardware adapter allowing <u>a software driver to set</u> said

indicator to indicate that said corresponding work queue element has been completed;

storing a new work queue element in a selected storage location in response to detecting that said indicator indicates that said corresponding work queue element has been completed.

18. (original) The method as recited in claim 17, further comprising storing a virtual address of said selected storage location and said corresponding work queue element in a first register.

19. (original) The method as recited in claim 18, further comprising notifying a hardware adapter when said new work queue element is stored by writing said virtual address of said new work queue element to said first register.

20. (original) The method as recited in claim 19, further comprising indicating in a second register, a number of pending work queue elements remaining to be serviced.

21. (original) The method as recited in claim 20, further comprising incrementing said second register in response to receiving said notification.

22. (original) The method as recited in claim 18, further comprising indicating in an in-service bit, whether said selected work queue element corresponding to said virtual address in said first register has been serviced.

23. (currently amended) The method as recited in claim 17, further comprising allocating said plurality of storage locations in a memory for said queue pair in response to a request from said one or more processors.

24. (original) The method as recited in claim 23, further comprising allocating additional pluralities of storage locations in said memory for a plurality of additional queue pairs in response to a plurality of additional requests from said one or more processors.